

Geothermal Electricity



Life on this planet is sustained by two great energy sources. One is probably obvious to most people – the sun – but the other is right under our feet. Temperatures at the Earth's core can reach 7,200 to 12,600 degrees Fahrenheit. This heat radiates outward through the mantle toward the crust and, in places, becomes accessible to provide a clean, renewable source of electricity to power our homes and businesses.



*RENEWABLE
ENERGY
PROGRAM*

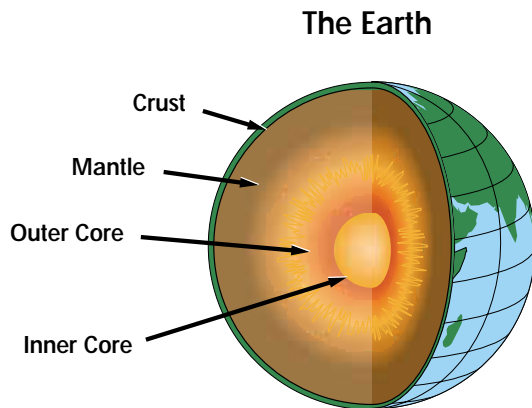
CALIFORNIA ENERGY COMMISSION

The power of geothermal



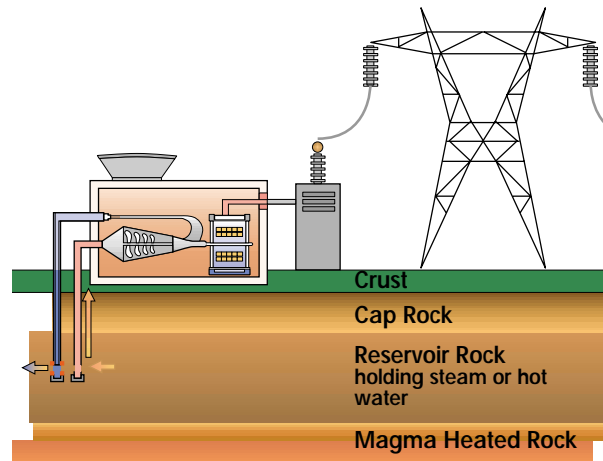
What is geothermal electricity?

"Geothermal" comes from the Greek words "geo," meaning earth, and "therme," meaning heat, so geothermal electricity is electricity produced from the heat of the earth. In geothermal power plants, the force of steam, heat, or hot water rising from beneath the earth's surface spins turbine generators to produce electricity. These power plants are situated over geothermal reservoirs, often reaching down as far as two miles to access their power sources.



power plants run 24 hours a day, every day. Since a geothermal power plant sits right on top of its fuel source, it is resistant to interruptions of power generation from natural disasters and unpredictable world events that interrupt transportation of fossil fuels.

Currently, 47 power plants in California tap geothermal sources to produce electricity, accounting for 40 percent of the world's geothermally generated electricity. These power plants have a dependable capacity of about 2,626 megawatts and produced almost 5 percent of California's total electricity in 2000. Generating this electricity locally



Geothermal Power Plant

Why is geothermal electricity important?

Geothermal electricity production releases only water vapor into the atmosphere, a far cleaner process than burning fossil fuels to produce electricity, which significantly pollutes the air. Harnessing geothermal energy is easier on the land than many other forms of power production, such as building large dams, mining for coal, or drilling for natural gas.

Geothermal energy is also completely reliable. Because the subterranean heat is constant, geothermal

helps our economy by creating jobs in manufacturing, installing, and maintaining geothermal electricity systems.

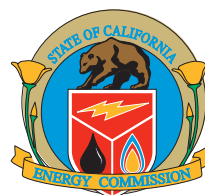
The future of geothermal electricity

It is estimated that California has a potential of more than 4,000 megawatts of additional power from geothermal resources, using current technologies. More efficient ways of harnessing geothermal energy are being developed that will allow us to produce an even higher percentage of our electricity from this potent renewable energy source while protecting the environment and promoting energy independence.

Harness the Power All Around Us

For more information on geothermal electricity and other renewable energy sources

www.consumerenergycenter.org



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